

**IN THE CLAIMS**

Please amend claims 5 and 11 and add new claims 15-18 as follows:

1. (Currently Amended) A module for optical communication having a modulator integrated laser includes a semiconductor laser active region and an optical modulation region for modulating the light from the semiconductor laser active region; and a temperature control region for controlling temperature of at least the optical modulation region, said semiconductor laser active region having a multiple-quantum well structure having at least two quaternary mixed compound crystal layers in which a band offset of a conduction band is larger than a band offset of a valence electron band, said at least two quaternary mixed compound crystal layers being selected from the group consisting of quaternary mixed compounds of In, Ga, Al and As and of quaternary mixed compounds of In, Ga, N and As, wherein a temperature of a semiconductor laser active region or a temperature of a component in thermal contact with the semiconductor laser active region for holding the temperature of the semiconductor laser active region is set to 35°C or higher during operation of the semiconductor laser active region and the optical modulation region.

2. (Previously Presented) A module for optical communication as defined in claim 1, wherein the temperature control component is a heating component or a heater.

3. (Previously Presented) A module for optical communication as defined in claim 1, wherein the temperature control component is disposed without having a cooling component.

4. Cancelled

5. (Currently Amended) A module for optical communication having a modulator integrated laser includes a semiconductor laser active region having at least two active regions and an optical modulation region for modulating the light from the semiconductor laser active regions; ~~and~~ a temperature control component for temperature control of at least the optical modulation region, and a control component for controlling the wavelength of the light emitted from the semiconductor laser active region, said semiconductor laser active region having a multiple-quantum well structure having at least two quaternary mixed ~~compounds~~ compound crystal layers in which a band offset of a conduction band is larger than a band offset of a valence electron band, said at least two quaternary mixed compound crystal layers being selected from the group consisting of quaternary mixed compounds of In, Ga, Al and As and ~~a quaternary mixed crystals~~ compounds of In, Ga, N and As, wherein a temperature of at least the semiconductor laser

active region or a temperature of the component in thermal contact with the semiconductor laser active region for holding the temperature of the semiconductor laser active region is set to 35°C or higher during operation of the semiconductor laser active region and the optical modulation region.

6. (Previously Presented) A module for optical communication as defined in claim 5, wherein the temperature control component is a heating component or a heater.

7. (Previously Presented) A module for optical communication as defined in claim 5, wherein the temperature control component is disposed without having a cooling component.

8. Cancelled

9. (Previously Presented) A module for optical communication as defined in claim 5, wherein the semiconductor laser active region and the optical modulation region are constituted, respectively, with semiconductor chip regions separated from each other.

10. (Currently Amended) A module for optical communication as defined in claim 5, wherein the semiconductor laser active region and the optical modulation region are

constituted as semiconductor chip regions integrated on ~~one~~  
the same substrate.

11. (Currently Amended) An optical transmission module having a modulator integrated laser includes a semiconductor laser active region and a plurality of optical modulation regions for modulating the light from the semiconductor laser active region, a multiplexer for multiplexing the outputted light and a temperature control component for temperature control of at least the optical modulation region, said semiconductor laser active region ~~has~~ having a multiple-quantum well structure having at least two quaternary mixed compound crystal layers in which a band offset of a conduction band is larger than a band offset of a valence electron band, said at least two quaternary mixed compound crystal layers being selected from the group consisting of quaternary mixed compounds of In, Ga, Al and As and a—quaternary mixed compounds of In, Ga, N and As, and the temperature of at least the semiconductor laser active region or the temperature of the component in thermal contact with the semiconductor laser active region for holding the temperature of the semiconductor laser active region is set to 35°C or higher during operation of the semiconductor laser active region and the optical modulation region.

12. (Previously Presented) A module for optical communication as defined in claim 11, wherein the temperature control component is a cooling component or a heater.

13. (Previously Presented) A module for optical communication as defined in claim 11, wherein the temperature control component is disposed without having a cooling component.

14. Cancelled

15. (New) A module for optical communication as defined in claim 1, wherein said multiple quantum well structure comprises a well layer and a barrier layer, both layers of which consist of the same materials InGaAlAs materials of the same InGaNaS materials and wherein both layers of the same InGaAlAs materials or the same InGaNaS materials each have a different ratio of the same materials.

16. (New) A module for optical communications as defined in claim 1, wherein said semiconductor laser active region and said optical modulation region are formed on the same substrate and are made of the same combination of materials with each said region having a different ratio of the same materials.

17. (New) A module for optical communication as defined in claim 5, wherein said multiple quantum well structure comprises a well layer and a barrier layer, both layers of which consist of the same materials InGaAlAs materials of the

same InGaAs materials and wherein both layers of the same InGaAlAs materials or the same InGaAs materials each have a different ratio of the same materials.

18. (New) A module for optical communication as defined in claim 11, wherein said multiple quantum well structure comprises a well layer and a barrier layer, both layers of which consist of the same materials InGaAlAs materials of the same InGaAs materials and wherein both layers of the same InGaAlAs materials or the same InGaAs materials each have a different ratio of the same materials.